



System Basics

Q. What is NOAA's Science On a Sphere (SOS)?

Science On a Sphere is a large visualization system that uses computers and video projectors to display animated data onto the outside of a sphere. Said another way, SOS is a globe that shows dynamic, animated images of the atmosphere, oceans, and land of a planet. Many displays are possible, limited only by the imagination.

Q. Where can I see a demonstration of a SOS system?

Current NOAA installations include Planet Theater® at the NOAA Earth System Research Laboratory in Boulder, Colorado. Additional systems have been and are being installed at a growing number of museums, science centers, and universities throughout the U.S. and the world. See http://sos.noaa.gov/news/sos_sites.html for a current list of installations, including some photographs.

Q. How is Science On a Sphere used at NOAA?

Science On a Sphere is used primarily as an education and outreach tool to describe the environmental processes of the Earth. At the NOAA Lab in Boulder, Colorado, SOS is included as part of nearly all public outreach activities. School groups on field trips, graduate and under-graduate students from local universities, researchers, and other visitors all have an opportunity to see SOS on pre-arranged tours of that facility. The typical SOS program is given by a live presenter.

Q. What constitutes a Science On a Sphere system?

The SOS system uses four off the shelf video projectors to display images onto a 68" diameter sphere. Each projector is driven by a computer. A fifth computer is used to control the operation of the display computers. The computers communicate with each other via a network. Each computer is a relatively powerful PC with dual-core processors and a high end graphics card. An audio system is included for recorded presentations.

Q. Can SOS run in an automatic or unattended mode of operation?

Yes. Visualizations for SOS are organized into play lists. These play lists are simple text files that are used to organize visualizations. The system loads a play list and through a couple of clicks, is set up to automatically loop through each item in the play list. SOS can play audio in sync with datasets, or can also play movies when processed through an editor and run through the SOS software.

Q. Where can I find additional information on Science On a Sphere?

The best place to start is at our website: www.sos.noaa.gov. for information on the basic SOS floor-plan, go to sos.noaa.gov/images/SOSFloorplan.pdf. For teacher information, see www.sos.noaa.gov/SchoolMaterials. To see a partial list of datasets and visualizations included with SOS, go to <http://sos.noaa.gov/datasets/>.

Q. Who do I contact to discuss specific questions I may have for my museum or science center?

Start by contacting Bill Bendel at william.b.bendel@noaa.gov or 303-497-6708. He will answer your questions or give you access to someone who can.